

## **REMARKS/ARGUMENTS**

Upon entry of this Amendment, claims 27-51 will be pending. Accordingly, the application currently presents twenty-five (25) total claims, of which two (2) are in independent form (claims 27 and 40). In light of the request for one month of extension, Applicant expects a fee of \$60 to be due, which is being paid electronically with submittal of this Amendment. For any other fees which are deemed necessary following submittal of this Amendment, the undersigned hereby authorizes such fees to be charged to our deposit account, Deposit Account No. 061910.

### **Double Patenting Rejections**

Claims 27-51 stand rejected under the judicially-created doctrine of obviousness-type double patenting. The double patenting rejection is acknowledged. However, as claims 27-51 are further rejected under U.S.C. 102(b) and 103(a), as described below, and since the conflicting claims 1-22 of copending Application No. 10/538,529 have not in fact been patented, Applicants choose to hold off on addressing the double patenting rejections for the time being and instead only address the 102(b) and 103(a) rejections herein. Applicants respectfully traverse the rejections of claims 27-51 under the judicially created doctrine of obviousness-type double patenting. However, if Applicants' arguments herein are found to overcome one or more of the standing 102(b) and 103(a) rejections, Applicants are willing to consider advancing prosecution of this Application by filing a terminal disclaimer in compliance with 37 CFR 1.321(c) to subsequently overcome the double patenting rejections.

### **Claim Amendment**

Claim 27 has been amended to correct a typographical error with respect to the term "electromagnetic induction". Previously, the term was provided as "electromagnetic duction". Applicant believes that no new matter will be introduced by this amendment, as support is found in the description of the present application, for example, on page 4, in the eighth paragraph.

## **Claim Rejections under 35 U.S.C. 102(b) and 103(a)**

Claims 27-43, 45, 47, and 51 currently stand rejected under 35 U.S.C. 102(b) as being anticipated by Quan et al. (U.S. Pat. No. 4,794,217). In addition, claims 44, 46, and 48-51 currently stand rejected under 35 U.S.C. 103(a) as being unpatentable over Quan in view of one of a variety of further references cited by the Examiner. Following a review of the cited references, Applicants believe that none of the references teaches or contemplates a susceptor system having a hollow susceptor element acting as one of the walls of a treatment chamber.

Accordingly, Applicants respectfully traverse the standing 102(b) and 103(a) rejections. To that end, in light of the below arguments, Applicants respectfully submit that, to one skilled in the art, claim 27 would neither be anticipated by Quan et al. (U.S. Pat. No. 4,794,217) nor be unpatentable in light of Quan et al. in view of any of Kordina et al. (U.S. Pat. No. 5,695,567), Kaeppler et al. (WO 02/38838 using U.S. Pat. No. 7,048,802 as its English translation), or Kaeppler et al. (WO 02/38839).

### **Response to Rejections**

Regarding the 35 U.S.C. 102(b) rejection of claim 27, after reviewing Quan, Applicant finds that the susceptor system taught therein includes two graphite plates 8, one being an upper plate and the other being a lower plate (Fig. 5, col. 7, lines 24-25). These two plates 8 are used to heat the wafer from both sides (col. 7, lines 24-26). As such, one skilled in the art would recognize that the two plates 8 are the susceptor elements of the system.

As Examiner states (on page 2 of the Office Action), the susceptor of Quan seems to have a cavity 26 that extends longitudinally. This cavity 26, as described below, appears to be the treatment chamber of the system in which the wafer is treated. While unclear from his wording from the 102(b) rejection, it appears that Examiner is indicating that the cavity 26 is constituted, or formed/defined, by one piece of graphite, with side walls 25 being constructed of quartz or silicon nitride. To this last point, Applicant would respectfully like to state that the side walls 25 of Quan are not potentially constructed of silicon nitride, but would only be covered on their inside surfaces by a film, which may be silicon nitride (col. 7, lines 39-41 and col. 8, lines 29-30).

After thoroughly reviewing the teachings of Quan, and particularly, the sections (col. 3, lines 62-66; col. 5, lines 27-33; and col. 7, line 8 to col. 8, line 36) and Figures (Figs. 5-7) which

Examiner has referenced in his 102(b) rejection, Applicant can find no teaching or suggestion that either one of the plates 8 is “hollow so as to have at least one through hole which extends in a longitudinal direction”, as is required in claim 27.

As described in the present application, e.g., with reference to Figure 1, such a hole (21 or 31) enables a first portion of the susceptor element (2 or 3, respectively) to be close to the treatment chamber (1) and a second portion of the susceptor element to be close to the heating solenoid (9). (See description on page 7, second and third paragraphs.) However, no such “through hole” is described or suggested in Quan with respect to its teaching of the plates 8.

Regarding Examiner’s explanation for the 102(b) rejection of claim 27, while Quan does have reference number 26 drawn to a space between the plates 8 in Figs. 5-7, the reference number has no corresponding description associated with it in the Quan patent. Examiner is presumably correct that reference number 26 represents a cavity, but such a cavity is similarly provided in the present application as the treatment chamber 1 (for example, see Fig. 1 and last partial paragraph on page 4). As described above, this cavity 26 could not be the “at least one through hole”, as described above and provided in claim 27, as it is not formed from at least one of the plates 8 being hollow. Further, this is not even a possibility because, as described above, the plates 8 of Quan are taught to be of graphite with only a single vertical hole 27 provided in the upper plate 8 to permit indirect sensing of the temperature of the wafer (col. 7, lines 24-26 and lines 34-36). Thus, Applicant respectfully submits claim 27, as originally filed, cannot be derived from the teachings of Quan.

In reviewing the other cited art from Examiner’s 35 U.S.C. 103(a) rejections, this art does not seem to address the above-described deficiencies with respect to Quan. For example, Kordina (U.S. Pat. No. 5,695,567) is used, regarding susceptor systems, for its presumed teachings to use a SiC coating on the susceptor walls. In addition, Kaeppler et al. (WO 02/38838 using U.S. Pat. No. 7,048,802 as its English translation) is used, regarding susceptor systems, for its presumed teachings (i) to provide grooves and/or ribs in a piece of an upper wall and/or a piece of a lower wall for joining with pieces of side walls and (ii) to provide a first refractory and thermally insulating structure which surrounds the susceptor system and is constituted substantially by a tube of high-porosity graphite. Further, Kaeppler et al. (WO 02/38839) is used, regarding susceptor systems, for its presumed teachings (i) to provide a recess

and disc in a susceptor and (ii) to provide a through hole used as a means to transport gas through the susceptor.

Accordingly, Applicant asserts that upon entry of this Amendment, the claims are hereby in condition for allowance. For the above reasons, Applicants believes claim 27 should be allowed. In turn, the allowance of claim 27 thereby renders 28-39 also allowable. The allowance of claim 27 shall also render claim 40 allowable, as claim 40 has all the same features of claim 27. In turn, the allowance of claim 40 thereby renders claims 41-51 also allowable. Favorable consideration and prompt allowance of the application are respectfully requested.

### **Conclusion**

Applicant believes that no new matter will be introduced by entry of these amendments and that the amendments are fully supported by the specification and application as a whole.

In light of the above, Applicant respectfully submits that the present rejections should be withdrawn and prompt allowance of this application is respectfully requested. If the Examiner feels that prosecution of the present application can be materially advanced by a telephonic interview, the undersigned would welcome a call at the number listed below.

Respectfully submitted,



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